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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                 | CONFIRMATION NO.       |
|--|-------------|----------------------|-------------------------------------|------------------------|
| 10/605,958   | 11/10/2003  | George P. Mattathil  | 60470.300103                        | 2957                   |
| 74029  | 7590        | 11/15/2007           |                                     |                        |
| Patent Venture Group<br>10788 Civic Center Drive, Suite 215<br>Rancho Cucamonga, CA 91730-3805 |             |                      | EXAMINER<br>PATEL, HEMANT SHANTILAL |                        |
|  |             |                      | ART UNIT<br>2614                    | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |  |                      |  |
|------------------------------|------------------------|--|----------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b>  |  |
|                              | 10/605,958             |  | MATTATHIL, GEORGE P. |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>      |  |
|                              | Hemant Patel           |  | 2614                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-16, 19-25 is/are rejected.
- 7) ☒ Claim(s) 6,7,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "62" in Figure 5 has been used to designate both RT and Internet Router. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: It describes Fig. 5 with remoter terminal 52 and POTS lines 24. These element numbers are missing in the Fig. 5 drawing.

Appropriate correction is required.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,674,749 hereinafter referred to as Parent '749. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the continuation are broader than the ones in parent patent, *In re Van Ornum and Stang*, 214 USPQT61, broader claims in continuation application are rejected as obvious double patenting over previously patented narrow claims. For example, claim 1 of the present invention is the same as claim 1 of the Parent '749 except that the present invention claim 1 does not recite remote concentrator, located between the customer premises and the transfer switch at the telco central office, accepting terminating node signal from access concentrator and communicating said terminating node signal to the transfer switch. Therefore, claim 1 of the present invention is broader than claim 1 of the Parent '749.

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5. Claims 12-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12-22 of U.S. Patent No. 6,674,749 hereinafter referred to as Parent '749. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the continuation are broader than the ones in parent patent, *In re Van Ornum and Stang*, 214 USPQT61, broader claims in continuation application are rejected as obvious double patenting over previously patented narrow claims. For example, claim 12 of the present invention is the same as claim 12 of the Parent '749 except that the present invention claim 12 does not recite remote concentrator accepting at least one terminating node signal communicated from access concentrator, integrating all terminating signals into a distributor node signal, and communicating the distributor signal to the transfer switch. Therefore, claim 12 of the present invention is broader than claim 12 of the Parent '749.

### ***Claim Objections***

6. Claim 1 is objected to because of the following informalities: It recites "the type" in line 1. There is no antecedent basis for this term. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim recites (ll. 13-14) "as many as plurality". This term is indefinite and vague.

9. Claim 3 recites the limitation "said packet layers" in line 11. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim recites (ll. 12-13) "as many as plurality". This term is indefinite and vague.

11. Claim 14 recites the limitation "said packet layers" in line 10. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 25 recites the limitation "said telco central office" in line 14. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.



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14. Claims 1, 3-4, 12, 14-15, 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Eakins (US Patent No. 5,946,323).

**Regarding claim 1**, Eakins teaches of a public switched telephone network (10) supporting circuit switched (19, 24, 32, 34, 44, 46) and packet transfer type (18, 20-22, 26-30, 38-42) devices at plurality of customer premises (12, 14) and intercommunicating via at least one central office (50), comprising: an access concentrator (48) accepting both switched signals from said circuit switched type devices (19, 24, 32, 34) and packet signals from said packet transfer type devices (18, 20-22, 26-30) and communicating both switched signals and packet signals as a terminating node signal to transfer switch (50) (col. 3, ll. 16-35), and transfer switch accepts terminating node signal and separates switched signals from received signals and transmits switched signals to circuit switched type devices (39, 44, 46) at another customer premises (14) and further separates packet signals from received signal and transmits packet signals to packet transfer type devices (38, 40, 42) at another customer premises (14) (col. 3, ll. 36-62) (refer to Fig. 1 for all item references; col. 2, ll. 28-col. 4, ll. 50).

**Regarding claim 3**, Eakins teaches of permanently dedicating DS0 channels for voice (circuit layer with number of sub-circuits initially provisioned for switched signals) and DS0 channels for data (packet layer dynamically shared for packet signals) for as few as none and as many as a plurality (col. 4, ll. 63-col. 5, ll. 6).

**Regarding claim 4**, Eakins teaches of an access concentrator (48) employing POTS protocol towards circuit switched type devices (19) and T1 protocol towards transfer switch (50) (col. 2, ll. 28-col. 3, ll. 35).

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**Regarding claim 12**, it recites a method substantially similar to the method performed by the system as claimed in claim 1. Refer to rejection for claim 1.

**Regarding claim 14**, refer to rejections for claim 12 and claim 3.

**Regarding claim 15**, refer to rejections for claim 12 and claim 4.

**Regarding claim 24**, Eakins teaches of transfer switch at a telco central office (50) accepting terminating node signal from access concentrator (48) at a first customer premises (12) wherein said access concentrator forms said terminating node signal from both switch signals from circuit switched type devices (19, 24, 32, 34) and packet signals from packet transfer type devices (18, 20-22, 26-30); said transfer switch (50) separating said switch signals from said terminating node signal for transmission onward to circuit switched type devices (39, 44, 46) at a second customer premises (14); and said transfer switch separating said packet signals from said terminating node signal for routing onward to packet transfer type devices (38, 40, 42) at said second customer premises (14) (refer to Fig. 1 for all item references; col. 2, ll. 28-col. 4, ll. 50).

**Regarding claim 25**, Eakins teaches of an access concentrator (48) for use in a communications system (10) with public switched telephone network (16, 56, 58, 60, 64) with circuit switched type devices (19, 24, 32, 34, 39, 44, 46) and packet transfer type devices (18, 20-22, 26-30, 38, 40, 42) at a plurality of customer premises (12, 14), comprising: access concentrator accepts both switched signals from said circuit switched type devices (19, 24, 32, 34) and packet transfer type devices (18, 20-22, 26-30); and communicates both of said switched signals and said packet signals as a



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terminating node signal to a transfer switch located at telco central office (refer to Fig. 1 for all item references; col. 2, ll. 28-col. 4, ll. 50).

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 2, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins as applied to claims 1, 12 above, and further in view of Gregory (US Patent No. 6,289,097 B1).

***Regarding claim 2***, Eakins teaches of providing an intermediate ATM switch (relay node) between customer-located ATM multiplexer (access concentrator) and central office ATM multiplexer (transfer switch) connected by T1 line to direct the portion of the traffic to high-speed network packet-switched network (col. 3, ll. 5-35). The use of repeaters (relay nodes) for communication lines covering longer distances was very well known in the art. Eakins is silent about this common feature of intermediate relay node for communicating over longer distances between customer premises and the telco central office.

However, in the same field of endeavor, Gregory teaches of using redirect repeaters that regenerate T1 digital signals over a T1 span between digital loop carrier (DLC) and the central office (col. 4, ll. 15-30).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eakins to use repeaters over a longer span between customer premises equipment (DLC access concentrator) and central office as taught by Gregory in order to amplify and regenerate digital signals on a communication line suffering from attenuation and decay over the long span of communication line (Gregory, col. 4, ll. 20-24).

***Regarding claim 13,*** refer to rejections for claim 12 and claim 2.

17. Claims 5, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins as applied to claims 1, 12 above, and further in view of Howell (US Patent No. 6,462,644 B1).

***Regarding claim 5,*** Eakins does not teach of using wireless link.

However, in the same field of communications, Howell teaches of a communications concentrator receiving, concentrating and communicating signals over a wireless link to various networks (Fig. 2; col. 4, ll. 64-col. 5, ll. 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eakins to use wireless link to communicate between concentrator and networks as taught by Howell in order to avoid the installation of landline telephone line in a remote area or in a situation where it is difficult to route a telephone line (Howell, col. 5, ll. 57-62).

***Regarding claim 16,*** refer to rejections for claim 12 and claim 5.

18. Claims 8, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins as applied to claims 1, 12 above, and further in view of Bhatia (US Patent No. 6,023,724).

**Regarding claim 8**, Eakins does not teach of using network address translation (NAT).

However, in the same field of communications, Bhatia teaches of an access concentrator (Fig.3 , item 300) employing network address translation for incoming and outgoing traffic (col. 20, ll. 53-col. 23, ll. 48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eakins to use network address translation for incoming and outgoing traffic as taught by Bhatia in order to "permit users at multiple workstations to simultaneously share a single user account at a network service provider" (Bhatia, col. 20, ll. 55-57) such that "the LAN modem will effectively multiplex all these outgoing packets onto a common network connection" (Bhatia, col. 21, ll. 5-7).

**Regarding claim 19**, refer to rejections for claim 12 and claim 8.

19. Claims 9, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins as applied to claims 1, 12 above, and further in view of Srisuresh (US Patent No. 6,058,431).

**Regarding claim 9**, Eakins does not teach of using network address translation (NAT).

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However, in the same field of communications, Srisuresh teaches of a router of service provider (telco transfer switch) that transfers packets and provides network address translation along with private internet protocol addresses (col. 5, ll. 18-col. 7, ll. 48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eakins to use network address translation for incoming and outgoing traffic at a service provider node as taught by Srisuresh in order to provide "network address translation and network address port translation as an external service in the access server of a service provider" so that "Such access servers (e.g., routers) would reduce the cost of stub routers that individual companies and organizations must purchase" (Srisuresh, col. 2, ll. 20-25).

***Regarding claim 20,*** refer to rejections for claim 12 and claim 9.

20. Claims 10, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins as applied to claims 1, 12 above, and further in view of Saito (US Patent No. 5,732,071).

***Regarding claim 10,*** Eakins does not teach of filtering traffic based on Ethernet MAC address.

However, in the same field of communications, Saito teaches of a system with bridges (access concentrator) supporting hosts (terminal devices) on Ethernet LANs using Ethernet protocols, sending and receiving Ethernet MAC frames to and from host devices, and bridge filters MAC frame traffic based on MAC address and forwards MAC

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frame traffic onward to ATM network (transfer switch) (col. 1, ll. 23-col. 3, ll. 57; col. 4, ll. 48-col. 9, ll. 23).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eakins to filter traffic based on Ethernet MAC addresses as taught by Saito in order to "reduce the traffic in the ATM network or the traffic in and out of the bridge device" (Saito, col. 7, ll. 28-29).

***Regarding claim 21,*** refer to rejections for claim 12 and claim 10.

21. Claims 11, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins and Saito as applied to claims 10, 21 above, and further in view of Eakins and Gregory as applied to claim 2 above.

***Regarding claim 11,*** Eakins teaches of a concentrator located between access concentrator and transfer switch (col. 3, ll. 10-15) and Gregory teaches of employing it for communication over longer distances between customer premises and the telco central office.

***Regarding claim 22,*** refer to rejections for claim 21 and claim 11.

22. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins, Saito and Gregory as applied to claim 22 above, and further in view of Eakins and Howell as applied to claim 16 above.

***Regarding claim 23,*** refer to rejections for claim 22 and claim 16.

***Allowable Subject Matter***

23. Claims 6-7, 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Regarding claim 6,*** Eakins teaches of the telco central office including a central office switch (50) connecting circuit switched type devices (39, 44, 46) at customer premises (14) other than first customer premises (12) (refer to Figure 1 for all these references).

Gregory teaches of telco central office including a router (Fig. 3, item 26; col. 4, ll. 28-30) connecting to a digital network connecting to packet transfer type devices at customer premises other than the first customer premises (col. 9, ll. 24-51; redirect repeater acting as a switch to route calls on computer network to connected devices).

The prior art of record Eakins and Gregory, either alone or in combination with other prior art of record does not teach the claimed detail feature of "transfer switch with a first external interface connecting to central office switch wherein the first external interface employs any of T1, E1, and DSx protocol to direct signals to the central office switch; and a second external interface connecting to the digital network wherein the second interface employs digital network protocol".

***Regarding claim 7,*** it depends from allowed claim 6.

***Regarding claim 17,*** it recites a method substantially similar to the method perform by the system as claimed in claim 6.

***Regarding claim 18,*** it depends from allowed claim 17.



***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

|   |          |
|---|----------|
| US Patent No. 5,541,917                                 | Farris   |
| US Patent No. 5,862,452                                 | Cudak    |
| US Patent No. 5,926,626                                 | Takeuchi |
| US Patent No. 6,055,236                                 | Nessett  |
| US Patent No. 6,243,377                                 | Phillips |
| US Patent No. 6,603,757                                 | Locascio |
| US Patent No. 6,246,679                                 | Yamamoto |
| US Patent Application Publication No. 2002/0044567 Voit |          |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemant Patel whose telephone number is 571-272-8620. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hemant Patel  
Examiner  
Art Unit 2614

HSP

*HSP*

*[Signature]*  
JEN TSANG  
SUPERVISOR, PATENT EXAMINER  
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